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ABSTRACT

Project STAR (Social Thinking and Reasoning Program) is a classroom-based social skills program for students in grades 5-8. To assess the long-term effectiveness of this program, students participated in the project (N=331) were compared with control students (N=191) during 1980-83. The hypothesis that there are significant differences in current achievement level, self-concept, and behavior of students who received STAR training in grades 6-8 between 1980 and 1983 compared to the original group of students who did not receive STAR training was tested. The evaluation was based on students' self report measures of health, self-concept, and social skills. Student record data was also collected on current attendance, academic performance, and behavior. The results of the first year of research show that students trained in STAR had significantly better grades and attendance, fewer health problems, and were more assertive and resistant to peer pressure to use drugs than were control subjects. These findings suggest that students do retain social skills training and put it to positive use in their lives. (ABB)

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THE LONG TERM EFFECTS OF SOCIAL SKILLS TRAINING IN ELEVATING OVERALL ACADEMIC GRADE POINT AVERAGE, SCHOOL ATTENDANCE, HEALTH LEVEL, AND RESISTANCE TO DRUG USE AND PEER PRESSURE

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ABSTRACT

Project STAR: First Year Follow-up Research Results 1983-84

Project STAR (Social Thinking and Reasoning Program) is a classroom based Social Skills program for students in grades 5-8. This study in its first of three years assessed the long term effectiveness of STAR by evaluating eight groups totalling 522 students who participated in STAR from 1980-83.

Evaluation was based on students' self report measures of health, self-concept, and social skills. Also, student record data was collected on current attendance, academic performance, and behavior. The results of the first year of research show that students trained in STAR have significantly better grades, attendance, fewer health problems, and are more assertive and resistant to peer pressure to use drugs.

Project STAR
FIRST YEAR FOLLOW-UP RESEARCH RESULTS 1983-84

Project STAR is an exemplary program that began in 1980 and was developed through federal funding (ESEA Title IV-C), which terminated June 1983. STAR was designed to meet the critical educational and societal needs of middle school students (grades 5-9). Students with poor social skills often have academic (reading and math) deficits and destructive behaviors which often lead to substance abuse. During the middle school years that overlap puberty, academic skills decline generally.

This study evaluated the progress of students who received the STAR Curriculum in classrooms and small groups compared to a comparison group of students who did not receive STAR during 1980-83.

Innovative Curriculum

STAR Curriculum includes the following areas:

- Effective Interpersonal Communication skills: 18 lessons on communicating effectively, including discriminating and understanding passive, aggressive, and assertive behavior, improving social conversation, making requests, making refusals, making and keeping friends, and coping with criticism.

- Understanding and coping with Personality Differences: 22 lessons based on Keirsey's adaption of the Myers Briggs personality theory. Students are introduced to the four basic personality types, their needs and strengths, career choices, learning styles, and communication patterns.

- Relaxation Skills: 10 lessons which teach students relaxation skills to cope with anxiety, peer group pressure, and the tremendous changes that accompany the transition from childhood to adolescence. The relaxation skills taught include progressive relaxation, autogenic relaxation, visualization, and diaphragmatic breathing.

These 50 lessons were designed, field tested, and refined to make them easily implemented by classroom teachers. The lessons are structured to be completed in a 30-50 minute time period. They were successfully implemented as a social science unit, as an elective in human relations, and as part of student advisement programs.

Evaluation of Long-Term Effect of the STAR Program

Previous results of the operation of Project STAR using this curriculum have shown significant growth in project participants over a comparison group in student self-concept, academic achievement, and social skills necessary to cope with peer pressure for drug use. These groups were determined to be comparable on the variables of achievement, self-concept and social skills before treatment began. The project evaluated the program with students ages 11-14 (grades 6-8). These positive results were encouraging and support the dissemination of Project STAR at these grade levels.

The present study addresses the question: Will these benefits continue to have a lasting effect on students? Follow-up research on students who participated in STAR training in 6th, 7th, and 8th grades as they move through high school is essential to answering the question on lasting benefits. Through the support of Children's Assistance Trust, a longitudinal study of these students is possible. For the first time it will be possible to determine the effectiveness of a preventative drug abuse program on students over a six year period (1980-1983--ESEA Title IV-C federal grant, 1983-86--Children's Assistance Trust grant). This is a report of the first year findings.

CURRENT PRACTICE: NO OTHER PROGRAMS EXIST

Extensive research through SMERC, ERIC, and the Centers for Education Improvement has shown that there are no programs in existence which address the social skill needs of withdrawn children at the middle school level. There have been two programs which have addressed the interpersonal communication of elementary age students. One program was from the San Diego County Office of Education and was designed for elementary age handicapped students. Another program is "Learning About Social Behavior" from Glendora, which is also primarily for elementary age students. Although both programs contain useful strategies, neither meets the unique needs of the middle school child with social skills deficits. In addition, no programs exist which can serve as a drug abuse prevention model for middle school aged children.

A PROGRAM TO IMPROVE ACADEMIC ACHIEVEMENT THROUGH MEETING SOCIAL/EMOTIONAL NEEDS

Research by Purkey (1970) and Aspy (1972) has shown that academic achievement is improved by meeting the social and self-confidence needs of students. The emotional turmoil created by the transition from childhood to adolescence frequently hinders cognitive development. A program that can assist students through this transition will have a significant impact on improving academic performance. The STAR program provides such a program.

THE FAILURE OF TRADITIONAL DRUG EDUCATION PROGRAMS

Most of the traditional drug education programs have failed. Research by Kearney (1980) has shown that students taught extensive drug factual information later use more illicit drugs than did students not taught all those facts. What is recommended is a program which addresses the needs of high risk students in a preventative approach. Project STAR provides that preventative approach.

METHOD

SUBJECTS

Subjects were 522 students in grades 6-8 who participated in the STAR Program as project (331) or control (191) students during 1980-83. These students currently are in grades 7-11 and attend 9 different schools in the Irvine Unified School District. Students were divided into a number of Treatment Groups to further study various methods of curriculum implementation.

Presented below are the 5 project groups involved in the study:

Group 0

1980-81 Lakeside Middle School

6, 7, 8th Grade - Approximately 90 students received STAR training by teacher adviser once or twice a week for one semester.

Group 1

1981-82 College Park

6th Grade - approximately 90 students received STAR training one time per week by project counseling assistant for the entire school year.

Group 2

1981-82 Greentree

6th Grade - approximately 34 students received STAR training 2 times per week by counseling assistant and classroom teacher the entire school year.

Group 3

1980-83 Sierra Vista

7th grade - approximately 73 students
8th grade - approximately 73 students
Received training every day for 9-10 weeks by Social Science teachers.

Group 4

1982-83 Northwood

6th Grade - approximately 30 students received STAR training one time per week by a psychologist for the entire school year.

Group 5

1983- Northwood

6th grade - approximately 72 students received STAR training two times per week by the classroom teacher one semester of the school year.

Below are the three control groups involved in the study:

Group 6
1981-83 Greentree
6th grade - 105 students received no STAR training.

Group 7
1981-83 Rancho San Joaquin
7th grade - 61 students
8th grade - 61 students
Received no STAR training

Group 8
1980-83 Venado
7th grade - 40 students
8th grade - 40 students
Received no STAR training

PROCEDURE

The hypothesis states there are significant differences in achievement level, self-concept, and behavior of students who participated in STAR training (Grades 6-8) between 1980-83 compared to comparison group of students who did not receive STAR training.

Students were assessed on 4 self-report instruments during the 1983-84 school term in the months of November and May.

- Self-concept was evaluated using the Adjective Checklist. The Adjective Check list provides students with a list of adjectives, some with positive connotations and some with negative connotations. The student is asked to check those that describe himself (or herself). Positive points are awarded for positive adjectives checked and negative points for negative adjectives checked. The implication, as described in professional literature about such techniques, is that the student with the most positive self-concept will make the most positive and least negative choices. The Adjective Checklist was validated by Vidoni for use with junior high students. (Vidoni, Dennis O. "Analysis of Adjective Check List." Journal of Educational and Psychological Measures, Vol. 1, 1977.)

- Susceptibility to drug abuse and social pressure were evaluated using the Irvine Social Influence Survey (ISIS). This survey was developed and pilot tested in collaboration with Dr. Manuel J. Smith to yield valuable new information about the ability of adolescents to cope with peer pressure toward drug use and sexual behavior. The ISIS was developed for the project because no comparable instrument was found which measures this ability and very little research has been done in this specific area.

- General healthfulness was measured in part by the Health Profile Report. In a short series of questions, students were asked to respond regarding their general health, recent medical appointments, and the state of their health relative to others.

- Any recent training in assertion was evaluated by a question asking the student if he/she had participated in training within the last three months.

In addition to these measures, the following information was collected on each student at the end of the 83-84 school year.

- Attendance was evaluated as a measure of healthfulness and general school adjustment by tabulating total absences and total unexcused absences.

- Achievement was evaluated by tabulating total grade point averages of students as well as academic grade point averages. Academic grade point averages omit elective, nonacademic courses in tabulation and therefore tend to give a truer picture of academic achievement in school.

- Recorded incidents of discipline problems were evaluated by tabulating checklists completed by Vice Principals at the nine participating schools indicating the existence of discipline files on project and control students.

The actual development, administration, and analysis of self report instruments was a complex, time consuming task which involved cooperation of many schools and departments within the district. In addition, individuals outside the district were involved in the project including: Dr. Manuel Smith who consulted on all aspects of the project, staff from the Educational Psychology Department of California State University at Long Beach who assisted in the data analysis, staff from Torrance Unified School District who assisted in programming and scoring answer sheets, and staff of Saddleback Unified School District who own and operate the Mainframe Computer used by our district for student record keeping.

One of the complicating though interesting aspects of this study was the lack of precedent for transferring information to and from the mainframe computer system, microcomputer terminals, and other mainframe computer systems for analysis, data filing, and storage. Information to complete the study came from student records stored on a mainframe system. Self report measures used answer sheets scored by computer and data was analyzed on a third computer. Finally, project data is being stored on microcomputers.

Administration of the student self report surveys was accomplished using the following procedure.

- Student surveys and computerized answer sheets were coded with student numbers and other identification information.

- Student surveys were labeled with the student's name on the front of a brown envelope and distributed to homeroom or first period teachers at the various school sites. Teachers were asked to distribute the envelopes to the specified students and give class time to complete the surveys. The teacher was asked to cover the student's name on the label with a district address label and return the surveys to the Guidance Project office.

RESULTS FIRST YEAR (1983-84)

A total of 20 variables were analyzed (complete list in appendix) across the eight treatment and control groups using the evaluation design approved by the U.S. Department of Education for National Diffusion Network Projects. This quasi-experimental design uses non-equivalent comparison groups which have been determined to be comparable to the experimental groups on total pretest scores and overall group characteristics. Specifically, project and comparison groups were determined to be comparable on: reading and math achievement, self-concept ratings, sex, and economic level of school attendance area. The data was analyzed using t-tests, analysis of variance, and chi-squares to assess the significance of the growth made by target or control groups.

Data evaluating total Grade Point Averages and Academic Grade Point Averages were available for students presently in high school who participated in STAR in the 7th and 8th grades. Comparable data for younger students is not available in district records.

Table 1, below, displays Grade Point Averages for project (Groups 0 and 3) and control students (Groups 7 and 8).

TABLE 3

Summary of Total Grade Point Averages

Group	N	Mean	Standard Deviation	Degrees of freedom	t/p
Project	85	3.1082	.637	174.61	-2.95 p=.001***
Control	92	2.7174	.657		

Table 1 indicates that this group of project students has significantly higher total point averages than the control group. The difference was significant at the .01 level of significance.

Table 2 displays the Academic Grade Point Averages (eliminating nonacademic electives) for project groups 0 and 3 and control groups 7 and 8 who received STAR in the 7th and 8th grade. These students are currently in high school.

TABLE 2

Summary of Academic Grade Point Averages

Group	N	Mean	Standard Deviation	Degrees of Freedom	t/p
Project	85	2.6118	.742	173.62	-3.65 p=.000***
Control	92	2.2065	.734		

Table 2 illustrates that project students had significantly higher Academic Grade point averages than control group. The difference was significant at the .01 level of significance.

The results indicate that students who participated in project STAR activities and learned assertive skills, personality styles, and related skills demonstrate higher achievement (better grades). This could be a significant finding if supported during the next two years of continued follow-up research. If social skills training leads to higher achievement, these new skills can be added to those considered essential.

The Grade Point Average information presented in the previous Tables 1 and 2 is pressented below graphically.

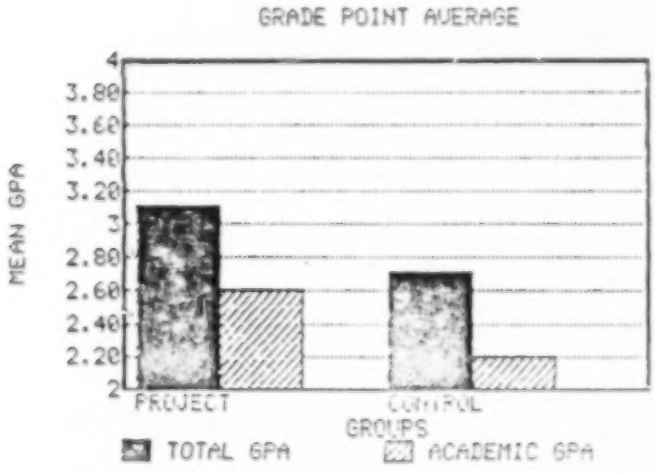

Table 3, displays total yearly absences for all project groups and all control groups.

TABLE 3

Summary of Total Absences

Group	n	Mean	Standard Deviation	Degree of Freedom	t/p
Project	264	5.5252	5.[illegible]0	267.09	-2.62 p=.009***
Control	143	6.9720	5.890		

Table 3 demonstrates that project students had significantly fewer absences than control students. The difference was significant at the .01 level. We can infer from these comparisons that STAR's Social Skills training results in better school adjustment and decreased illness or need to withdraw.

Training in Social Skills can lead, therefore, to: better attendance, feeling personally competent, better problem solving, and being more able to meet personal needs.

Table 4 displays the total unexcused absences for the year for all project and control groups.

TABLE 4

Summary of Total Unexcused Absences

Group	N	Mean	Standard Deviation	Degree of Freedom	t/p
Project	264	.2803	.812	152.21	-2.96 p=.004***
Control	143	1.0769	3.162		

Table 4 demonstrates project students have significantly less unexcused absences. This comparison is significant at the .01 level. Fewer unexcused absences may be an indication of better school adjustment and fewer discipline problems.

Trained students don't seem to find school as stressful generally and consequently don't avoid it for excused or unexcused reasons.

Attendance information described in the previous Tables 3 and 4 is presented graphically below:

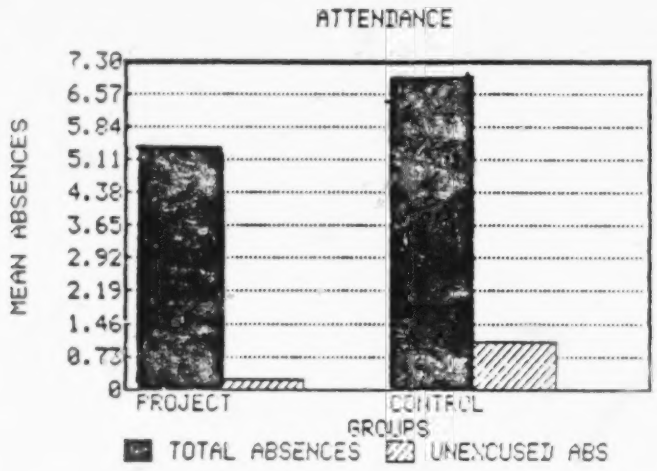

Table 5 below, presents the Health Rating Profile for project and control students.

TABLE 5

Summary of Health Profile

Health Rating:	Project Students Number	%	Control Students Number	%
Excellent	126	47.0	43	29.5
Good	60	22.4	33	22.6
Fair	15	5.6	8	5.5
Poor	4	1.5	2	1.4
Very Poor	63	23.5	60	41.1
TOTAL	268	100.	146	100.

Obtained Chi-square = 16.99659 with 4 Degrees of Freedom

Significance = .0019***

Table 5 demonstrates that project students have significantly fewer reported health problems than comparison students. This comparison is significant beyond the .01 level and indicates Social Skills training is associated with increased feelings of [physical well being. The information on student health presented in Table 5 is shown graphically below.

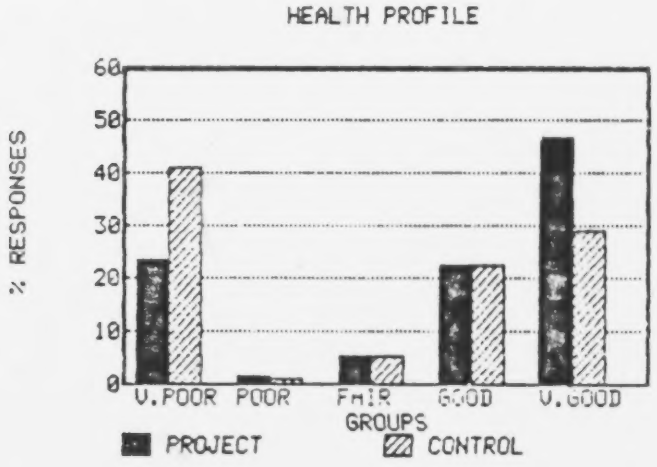

Table 6, below, displays the percentage of total nonassertive student responses to the Irvine Social Influence Survey for all project and control groups.

TABLE 6

Summary of the Percentage of Total Nonassertive Responses on the Social Influence Survey

Group	N	Mean	Standard Deviation	Degrees of Freedom	t/p
Project	150	.0866	.100		
				248	-2.65
					p=.009***
Control	100	.1291	.154		

Table 6 demonstrates that project students reported significantly fewer nonassertive responses than control students on this self report measure of assertion. The difference was significant at the .01 level of significance. This finding indicates that project students have retained the assertive skills they learned through participation in the STAR Program during their years in the Middle School. This is supported by previous research which indicates that students with assertive skills are more resistant to peer pressure to use drugs (Bloom 1979).

Table 7, below, displays the percentage of passive responses made by project and control groups on the Social Influence Survey.

Table 7

Summary of Percentage Passive Responses on the Social Influence Survey

Group	N	Mean	Standard Deviation	Degrees of Freedom	t/p
Project	152	11.1741	11.408	250	-2.43 p=.016**
Control	100	15.4320	15.772		

Table 7 indicated that project students report significantly fewer passive responses that control students. Project students tended not to respond passively in this assessment when confronted with conflict situations with peers and others. The difference was significant at the .01 level of significance.

Table 8, below, displays the aggressive responses made by project and control students on the Social Influence Survey.

Table 8

Summary of Percentage Aggressive Responses on the Social Influence Survey

Group	N	Mean	Standard Deviation	Degrees of Freedom	t/p
Project	151	3.6291	9.690	249	-2.51 p=.013**
Control	100	7.7860	16.539		

Table 8 illustrates that project students self reported significantly less aggressive responses to recent situations presented on the survey than control students. This difference was significant at the .01 level of significance.

Table 9, below displays the response of project and control students on the Adjective Checklist.

Table 9

Summary of Positive Responses on the Adjective Checklist

Group	N	Mean	Standard Deviation	Degrees of Freedom	t/p
Project	152	41.0263	8.924	250	-.90 p =.370
Control	100	42.0100	7.836		

Table 9 indicates there is no significant difference between project and control groups on the number of positive descriptive adjectives chosen on this instrument designed to measure self-concept. It is possible that the Adjective Checklist is not sensitive to the behavioral changes students experience in assertive training and thus does not discriminate between trained and untrained student groups as other measures do.

Table 10 describes the number of students having school records of discipline incidents.

Table 10

Summary of Discipline Incidents

Discipline Incidents Files:	Project Students Number	%	Control Students Number	%
YES	152	42	129	46
NO	212	58	149	54
TOTAL	364	100	278	100

Chi-square = 1.381 with 1 Degree of Freedom

Significance = .238

Table 10 indicates there were no significant differences between project and control students in the number of existing discipline files. Further study may be useful on this dimension to explore types of discipline incidents and if they vary for trained and untrained students.

SUMMARY

Evaluation data has been presented in response to the stated hypothesis of this study:

> There are significant differences in the current achievement level, self-concept, and behavior of students who received STAR training in grades 6-8 between 1980 and 1983 compared to that of the original comparison group of students who did not receive STAR training.

A summary of the first year of follow-up research is as follows:

Measures	Outcome
Achievement Measures	
Total Grade Point Average	STAR students have significantly higher total GPA's.
Academic Grade Point Average	STAR students have significantly higher Academic GPA's.
Behavior and Self-Concept Measures	
Total Absences	STAR students have significantly fewer absences.
Total Unexcused Absences	STAR have significantly fewer unexcused absences.
Social Influence Survey	STAR students reported significantly fewer nonassertive responses to social influence situations than untrained students and trained students were less susceptible to peer influence in the area of drug abuse.
Health Profile Report	STAR trained students reported significantly fewer health problems than untrained students
Adjective Checklist	There were no significant differences between groups on this measure.
Recorded Discipline Incidents	There were no significant differences between groups on this measure.

The evaluation of student record data makes a strong case for the Social Skill training of STAR. Students' retention of these skills is evidenced by their continued advantages over their untrained peers in academic success, time in the classroom, and better general health. These differences can not be accounted for by other variables in that the groups were matched originally and are currently quite different in performance. By improving attendance, achievement, health, and Social Skills, STAR equips students with the tools to achieve success in school and in life. These evaluation findings are especially significant for educators who are responsible for such student growth.

The results on discipline incidents did not discriminate between the project and control groups. However, further study is planned in the future on the type and seriousness of incidents which may discriminate between the groups.

Results of the Adjective Checklist may reflect a pattern of giving socially desired responses. It is possible that the Adjective Checklist is not as sensitive to differences between project and control students as the other instruments in the study.

The results of the first year of follow-up research look very promising. We can conclude that students do retain social skills training and put it to positive use in their lives. It will be interesting to find out if this pattern changes over the next two years as students proceed through high school and time between training and assessment increases.

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APPENDIX

	Page
RESEARCH DESIGN SUMMARY FOR 1983-84	a
RESEARCH VARIABLE LIST	b

Follow-up Research for Project STAR

Funded Through Childrens Assistance Trust

Research Design 1983-84

Hypothesis

There are significant differences in achievement level, self-concept, and behavior of students (grades 6-8) who received STAR training between 1980 and 1983 compared to a comparison group of students who did not receive STAR training.

Subjects

A sample of at least 331 project students and 191 comparison students will be periodically assessed to determine their current academic and social skill levels. All subjects participating in the study will have parent permission.

Procedure

Subjects will be periodically assessed in their current classes during the months of December, March and May as follows:

A. Self-concept through the Adjective Checklist

B. Assertion level through the Social Influence Survey

C. Health Profile Report

In addition, student records will be reviewed annually to ascertain the following information:

A. Attendance rates

B. Recorded discipline incidents

C. Academic Grades

Appendix a

RESEARCH VARIABLES

1. Student number
2. Sex
3. Grade Level
4. Treatment group
5. School
6. Adjective Checklist total
7. Percentage score of Adjective Checklist
8. Passive score of Social Influence Survey
9. Percentage passive score on Social Influence Survey
10. Aggressive score on Social Influence Survey
11. Percentage aggressive score on Social Influence Survey
12. Percentage total score on Social Influence Survey
13. Healthfulness score
14. Subsequent assertion training question
15. Total absences
16. Unexcused absences
17. Total Grade Point Average
18. Academic Grade Point Average
19. Discipline incidents file
20. Previous discipline incidents file

Appendix b